

# **Chapter 4**

## **Current Programs to Control Nonpoint Sources of Pollution**

This chapter includes a description of major state and federal programs to address surface water, ground water, and aquatic habitat in Washington. Several of these programs are driven by the need to protect key resources. (See Chapter 7.) They cover planning and implementation at a variety of scales. Each of these programs is vital to the State's efforts to address nonpoint source problems.

### **State Programs: The Watershed Planning Act**

The Watershed Planning Act (WPA) is found in chapter 90.82 RCW and is often referred to by its bill number (HB2514). It establishes a watershed management process to assess availability of water, develop in-stream flow levels, protect water quality, and restore fish habitat. Another primary purpose is to assist planning units to address Endangered Species Act and Clean Water Act concerns, if they so choose. Grants are available to local planning units in three phases:

- 1) Organizing the planning unit and determining the scope of planning to be conducted,
- 2) Conducting watershed assessments, and
- 3) Developing a watershed plan.

Planning units are required to assess water supply and develop strategies for future use. They may decide to develop strategies for in-stream flows, water quality, and habitat. Part of the planning units' charge is to review historical data. This includes planning, projects, and activities that have already been completed, as well as the products and status of those that have been initiated but not completed. The intent is a sort of gap analysis, so that products are incorporated and work is not duplicated.

At the time of this writing, 39 of the 62 WRIAs have begun the Watershed Planning process. Fifteen have elected to include water quality in the scope of their assessment and planning. Additional planning units will be created after the current legislative session is complete. The goal is for all WRIAs in the state to eventually be incorporated into the WPA process.

### **Salmon Recovery Act**

A second major planning process is the Salmon Recovery Act (SRA) (found in Chapter 75.46 RCW), also known as SB 5595. The intent of this legislation is to address salmonid habitat restoration in a coordinated manner, and to develop a structure that

allows for the coordinated delivery of federal, State, and local assistance to communities for habitat projects.

Under the SRA, a committee is formed involving all restoration interests. A limiting factors analysis is carried out with the assistance of State fish biologists. The committee is provided with the analysis and information related to fish distribution, habitat requirements and limitations, and in-stream flow data and recommendations. They use that information to identify viable habitat restoration projects and potential funding sources. Then they develop a prioritized project list and a schedule that they feel will produce habitat capable of sustaining healthy salmon populations. Each schedule is updated on an annual basis, and projects may be added. An interagency review team receives legislative appropriations for grants.

Forty-one WRIAs are now involved in limiting factors analyses, anticipated for completion in 2001. Eleven areas have actually formed committees to undertake the full SRA process. It is anticipated that the area of involvement will be expanded when cutthroat trout are ESA listed.

Local governments are working to coordinate the Watershed Planning Act and the Salmon Recovery Act. The data and habitat information generated during the SRA process can provide baseline information to a WMA planning unit for the in-stream flow and optional habitat plans. The WMA is responsible for the long-term watershed planning. The SRA is designed to see that habitat restoration funding is wisely spent.

Together, these two processes are the foundation of long-term watershed planning in Washington. Both rely on local governments assuming responsibility for planning and action. Both bring together various levels of government, tribes, conservation or special districts, nonprofit groups, citizens, and others. Both are funded through the State legislature. These are big efforts that involve a major commitment from all the interests.

## **Statewide Strategy to Recover Salmon**

In January, 1999, the Joint Natural Resources Cabinet released a complete working draft of *Extinction is Not an Option: A Statewide Strategy to Recover Salmon*, a guide for what needs to be done to recover salmon. During the past eight months the Joint Cabinet has carefully listened to public comment on the strategy and has indicated recommendations that would improve our collective efforts to recover salmon.

The 1999 state legislature passed Senate Bill 5595, the Salmon Recovery Funding Act, which required the Governor to submit the strategy to the National Marine Fisheries Service and the U.S. Fish and Wildlife Service by September 1, 1999. The legislation also requires the Governor to begin revision of the strategy in September 2000, through public outreach efforts.

An Early Action Plan has been developed which specifies activities related to salmon recovery that state agencies will undertake in the 1999-2001 biennium. Also included are

expected outcomes from those actions and performance measures. Many of the early actions are nonpoint source control activities. To ensure consistency between the Salmon Strategy and the Nonpoint Plan, we have incorporated 50 actions from the Salmon Strategy as recommendations in this plan.

## **Forests and Fish Report**

The Forests and Fish Report is the result of negotiations between landowners, federal and state agencies, local governments and some tribes. It contains recommendations to enhance forest practices in the state to improve water quality and fish habitat. The Forests & Fish Report, dated April 29, 1999, has been submitted to the Forest Practices Board. Following the Forest Practices Board meeting of September 29, 1999, DNR and the Board drafted emergency rules consistent with the Report and the emergency rules will be out for public review, following the filing with the state code reviser, by October 20, 1999. The Board is expected to take action before the end of February, 2000 on the proposed emergency rules that are consistent with the Forests & Fish Plan. Permanent rule making by the Forest Practices Board has also started. The Forests & Fish Report will help focus SEPA EIS analysis.

The legislature enacted legislation (Chapter 247, Laws of 1999) which requires the Board to adopt regulations consistent with the report. In addition, assurances have been received from NMFS, USFWS, and EPA that the recommendations, if implemented, meet the requirements of the ESA and CWA. The Forests and Fish report addresses two key water quality concerns on forest lands:

- Streamside Management Areas will be increased to include a 50 foot “no-touch” zone where harvest will be prohibited, plus an inner and outer zone which allow some harvest. The goal of the streamside management areas is to create riparian conditions that will meet the stand characteristics of a mature riparian forest at approximately 140 years of age. The attainment of resource objectives for fish bearing streams includes protections for stream temperature and producing adequate levels of large woody debris and nutrients, such as detrital material, to meet habitat objectives. The buffers will also reduce sediment and protect streambanks. These zones will be designated using a formula which is a function of the 100-year potential height of the resident forest, the width of the stream, and other ecosystem and site characteristics. The inner zone will allow some thinning of trees, and the outer zone will allow more significant harvest. Specific standards are established for western and eastern Washington.

Protection measures will also be provided to non-fish bearing streams as they are considered waters of the state, and can deliver water, organic matter, and sediments to fish habitat. Non-fish streams will fall into two categories: perennial and seasonal. Perennial non-fish habitat streams will have a 50-foot wide no harvest buffer on each side of the stream for at least 50% of their length. The buffering could increase up to 100% where sensitive sites such as perennial seeps, springs, unstable inner gorge slopes, alluvial fans and perennial stream intersections occur. All sensitive sites will

receive buffering to protect perennial waters and amphibian habitat. A 30-foot equipment limitation zone on each side will border any remaining perennial and all seasonal non-fish habitat streams. This zone is designed to preserve streambank vegetation, prevent bank erosion and significantly limit the potential for sediment delivery to the streams. The eastside non-fish habitat stream protection will be equal to the westside strategy but will allow for a continuous buffer for the entire stream length with limited entry.

- A roads plan will be required of all major forest landholders in the State. The plan will identify and prioritize roads to be repaired and abandoned. Special emphasis will be on culvert replacement and abandonment of roads near or in riparian areas. Plans will also focus on future road development and methods to minimize road densities in forestlands. Timelines for repair and abandonment projects will be established in the plan, with annual reports submitted to DNR. Buffering would also be required in sensitive, unstable areas such as springs, headwalls, etc.

Additional efforts will be focused on identifying and protecting unstable slopes, improvement in the classifications of and protection for streams to include streams that have the potential for fish presence once the instream and habitat conditions have recovered, pesticide applications, wetland protections, watershed analysis, and development of alternate plans that will provide public resource protection equal to the standard Forests & Fish Report. In addition, the Report recognizes that current scientific knowledge lacks answers to some water quality and fish habitat resource questions. Specific technical research projects are listed in the Report and an adaptive management process is recommended for completing those projects. The process includes planning, budgeting, and project management along with technical and policy review and dispute resolution. The recommendations place final authority in the hands of the Forest Practices Board, with federal agency oversight to determine whether the Board is responding to the new scientific findings.

The Forests and Fish Report was adopted by the legislature in 1999 and is embodied in HB 2091. The Forest Practices Board was directed to develop new rules that codify the agreements in the report. Funding was provided for implementing the bill and incentives were provided to forest landowners.

The Forests and Fish Report is part of the overall salmon recovery strategy for the state. The Governor's office has recently released a draft of this strategy, entitled Extinction is Not an Option.

## **The Dairy Nutrient Management Act**

The 1998 legislature overhauled the State's dairy waste program, creating the Dairy Nutrient Management Act from the previous Dairy Waste Management Act, chapter 90.64 RCW. In the new act, all dairies in the state are required to register with Ecology and prepare and implement a dairy nutrient management plan. Plans must be approved by the local conservation district and follow NRCS standards unless alternative methods

are established by the Conservation Commission or a Professional Engineer. Ecology must inspect all dairies in the state by October, 2000, and in response to any complaints regarding any dairy operation in the state.

The NRCS and local conservation districts first began planning for dairy waste management in the late 1960s. The primary focus was to protect non-contact waters (clean water) from livestock confinement areas. In the late 1970s and early 1980s, NRCS and CDs began to encourage and plan for long-term storage of wastes including diversion, collection, transfer, and application.

Under the Washington State 1998 Dairy Nutrient Management Act, all dairy farms licensed by the state Department of Agriculture are required to have comprehensive nutrient management plans approved by their local conservation district by July 1, 2002. The Act also requires both the dairy producer and local conservation district to certify these plans as fully implemented by December 31, 2003.

Based on the registration process, Ecology found in 1999 that 64 percent of all dairy farms have waste management plans and 54 percent of all farms are fully implementing these plans.

The 1998 act also required the Washington Conservation Commission to develop minimum elements for all of the nutrient management plans. They are:

1. A description of the dairy, its location, layout, herd size, and process wastes inventory;
2. A description of all system components, location, layout, size, and practices;
3. System operation and maintenance requirements;
4. A description of all waste application including an accounting of the nutrients available, crops applied to, fields and soil types applied to, and the amount and timing of process wastewater and process solids applications;
5. Use of a waste storage facility designed, constructed, operated, and maintained to meet all applicable practice standards and specifications found in the NRCS Service Field Office Technical Guide.

These minimum elements were approved by the Conservation Commission on December 2, 1998.

In 1999, the legislature passed Senate Bill 5803 establishing a Dairy Nutrient Management Task Force to review implementation of the 1998 Dairy Nutrient Management Act (Chapter 90.64 RCW). The Task Force, composed of legislators, agency representatives, dairy producers and an environmental organization, makes recommendations on issues such as Ecology's dairy farm inspection program, and development and implementation of dairy nutrient management plans. The law also requires Ecology to develop and distribute a document titled "How to Survive a Dairy Nutrient Management Inspection" before January 30, 2000.

## **Total Maximum Daily Loads (TMDL)**

The Clean Water Act requires States to prepare a list of water bodies (called the 303d list) that do not meet water quality standards, every two years. Ecology uses data collected by agency scientists, tribes, State and local governments, industries, and others to develop the list. A TMDL, or water cleanup plan, must be developed for each of the impaired water bodies on the list. EPA must approve the plan.

A TMDL has five main components:

- identification of the type, amount, and sources of water pollution in a particular water body or segment,
- determination of the capacity of the water body to assimilate pollution and still remain healthy for its intended uses, such as agriculture, drinking water, recreation, industrial, and municipal uses.
- an allocation of pollution loading that will be allowed to meet water quality standards,
- a strategy to attain the proper loads, and
- a monitoring plan to assess effectiveness.

Ecology is working with EPA to address 303(d) listed water across the state. In most cases, TMDLs to clean up or prevent nonpoint source pollution involve a local planning effort and most implementation actions will be local projects.

## **Watershed Analysis**

Timber, Fish, and Wildlife (TFW) cooperators developed Watershed Analysis to address the cumulative effects of forest practices on fish, water, and capital improvements. TFW cooperators include Indian tribes, landowners, environmental groups, counties, state and federal agencies. Ecology and the Forest Practices Board (WAC 222-22) have adopted it into regulation.

Watershed analysis is a biological and physical assessment of a watershed followed by development of "prescriptions" designed to protect and restore public resources. It evaluates forest practices as well as other land use activities in a watershed of 10,000 to 50,000 acres. An interdisciplinary team made up of certified state, tribal, or private resources conducts each analysis. Certification requires a minimal level of education and field experience, and the completion of a weeklong training course.

The analysis uses various modules: mass wasting, surface erosion, hydrology, riparian, stream channel, fish habitat, water quality, water supply/public works, and routing. The modules are then brought together, and prescriptions are developed and become tools for

improvements leading to compliance with water quality standards. DNR enforces these prescriptions as conditions on forest practice permits, through road maintenance plans or other means. Where land use activities other than forest practices harm water quality, the information is forwarded to the appropriate agency.

Before beginning an analysis in a watershed, DNR tells landowners, Indian tribes, agencies, and the public how they can participate or comment on drafts. The prescriptions developed through Watershed Analysis are approved by DNR after public comment through SEPA.

## **Puget Sound Water Quality Management Plan and Local Watershed Action Plans**

The Puget Sound Water Quality Action Team, with advice from the Puget Sound Council, is mandated to implement and periodically update the Puget Sound Water Quality Management Plan. Implementation of the plan is guided by biennial work plans that coordinate all water quality programs within the Puget Sound basin.

The watershed planning program in Puget Sound was developed as a result of the Puget Sound Water Quality Act and the Puget Sound Water Quality Management Plan. Guidelines for the planning process are promulgated in WAC 400-12, and the plans are sometimes referred to as 400-12 plans. Ecology administers the local watershed program, with Puget Sound Water Quality Action Team oversight.

The act and Management Plan pertain to the 12 Puget Sound counties. However, several counties outside the Puget Sound area have successfully used the 400-12 approach to develop watershed plans. To date, there are over 35 Puget Sound watersheds with approved plans.

The purpose of these watershed action plans is to identify, correct, and prevent nonpoint source pollution, and protect beneficial uses of water. Later plans also deal with habitat restoration and protection. Ecology provides program oversight, technical assistance and grants to local entities to develop and implement watershed plans.

Local officials appoint community-based watershed management committees made up of county and city governments, conservation districts, tribes, businesses, individuals and special interest groups. Guided by WAC 400-12, the committees develop a watershed plan, based on the results of a characterization. Local watershed action plans include:

- a watershed characterization,
- problems, goals and objectives for each watershed,
- strategies for controlling and preventing nonpoint pollution and restoring habitat,
- strategies for carrying out the plan – monitoring, financing, timelines, and accountability, and

- opportunities for public involvement and participation.

The implementation strategy includes actions required by each implementing entity: a schedule, estimated costs and budget, a long-term financing element, a dispute resolution process, a strategy for coordination with ongoing programs, provisions for public involvement, and a method for evaluating the effectiveness of the plan. The committee seeks commitment from all parties responsible for plan actions. State and federal agencies provide both technical and financial assistance.

The watershed planning rule calls for adequate opportunities for public input throughout the watershed plan development. These opportunities include public meetings and hearings, watershed events and citizen workshops, and other means of soliciting public comment and participation. The plan is subject to the requirements of SEPA before approval, including the public participation requirements.

## **River Basin Characterization**

Ecology has developed a fundamentally new approach to evaluating the role of water in river basins (WRIAs) in the Pacific Northwest. This new process was supported, in part, by the Departments of Transportation and Fish and Wildlife and designed to address the need for a basin level assessment tool to be used by state agencies and local communities to address salmon habitat, flooding, water use and water quality.

The characterization process seeks to better understand:

- Key basin processes,
- Human-caused changes to those processes,
- The extent of past changes,
- The effects of future change, and
- Where preservation and restoration of basin processes have the best chance of success.

The assessment carried out as part of the characterization is at a large scale and is meant to provide an overview and guidance to people attempting to address both sub-basin and site specific problems. It integrates watershed process calculations around the common theme that natural system processes create and maintain functions important to residents.

The outcomes of the characterization include:

- A picture of natural processes in the basin and a description of how they have been altered
- Sub-basins ranked by their potential for process alteration
- Identification of multiple process problems, and
- Recommendations for further activities.

The tool was developed in the Snohomish River Basin of western Washington. Local watershed groups are currently assessing how the information can be best put to use in



the basin. Further refinement is underway, and testing in other parts of the state is planned before the process is made available for broader application.

## **Water Quality Plan of Action**

These plans are a product of Ecology's five-year, five-step watershed approach to water quality management. During the first year of the five-year cycle, Ecology staff work with local communities to develop a needs assessment for the management area. After some supporting studies and fieldwork, the Plan of Action is produced to address priority problems identified in the needs assessment. The Plan outlines long- and short-range needs and water quality strategies that Ecology and local entities will implement during the next five years, as resources allow. It includes point source activities such as permit writing and issuance. It also includes nonpoint source activities like TMDLs, providing technical assistance for implementation of BMPs or watershed plans, and participation on technical workgroups/issues. It identifies success measures and designs follow-up monitoring.

## **Lake Restoration Projects**

Washington has maintained a viable lake restoration program since 1976. All projects are initiated at the grass roots level and a public entity must serve as the local sponsor and provide 25 percent of the project cost. State funding has been provided to projects sponsored by state agencies, tribal and local governments, municipalities, and county governments.

Lake restoration projects are conducted by a community-based interest group. A project begins with a physical, chemical, and biological characterization of the lake. Various lake restoration approaches are evaluated to determine which are most feasible for implementation. At the end of Phase I of a lake restoration project, the planning group recommends a restoration plan. The recommended strategy must result in meeting identified water quality goals. The lead agency must satisfactorily complete the SEPA process, including the public participation requirements. Public input is solicited in a public meeting on water quality goals and acceptable alternative strategies. Additional public meetings are held to solidify public acceptance of a selected restoration plan.

Phase II consists of implementation of the restoration plan. After construction or implementation activities are complete, a minimum of two years of post-restoration data are collected to evaluate the effectiveness of the chosen approach. In Phase II, the planning committee also develops a long-term watershed management plan to ensure that prevention and improvement efforts continue after a lake's restoration grants have finished.

Five years after implementation of the Phase II projects, lakes are eligible for Phase III post-restoration assessment funding. The purpose of these projects is to evaluate the effectiveness and longevity of the restoration efforts.

## Shellfish Closure Response Plans

Washington State's Shellfish Restoration Program is a multi-agency protection effort guided by the Department of Health in cooperation with Ecology, tribal governments, local health departments, conservation districts, and watershed management committees. Shoreline surveys and water quality monitoring studies are routinely conducted in shellfish areas to select restoration project areas.

The Department of Health classifies and monitors commercial shellfish areas using standards and guidelines established by the Food and Drug Administration National Shellfish Sanitation Program. Whenever an area is reclassified (recertified or downgraded), the Department of Health prepares a sanitary survey report detailing the shoreline and water quality conditions that have resulted in the reclassification. The report includes the criteria that have been set as the water quality goal for the area.

When an area classification is downgraded, the Departments of Health, Ecology, and Puget Sound Action Team initiate a closure response process involving local governments, tribes, and other groups that can provide resources to solve the problem. A final **Closure Response Plan** includes the actions needed to identify the pollution sources, a schedule for implementing remedial actions, and the funding sources for these actions.

A shellfish area restoration project contains both public involvement and education elements. These elements are identified in the final closure response plan. They typically address on-site sewage system maintenance or problems associated with agricultural practices.

As part of a restoration project, Health conducts a monitoring program to track the results of the watershed remediation activities. Areas that have been successfully upgraded as a result of a restoration project are placed back on the commercial program monitoring schedule. In this program, water quality is monitored monthly for conditionally approved areas and bimonthly for restricted or approved areas.

## Coordinated Water System Plans

Coordinated Water System Plans serve to integrate water utility development with land use planning. The plan normally consists of two parts: individual Water System Plans for each water system within a "critical water supply service area" and an Area-Wide Supplement which addresses water system concerns pertaining to the area as a whole.

Source Water Protection Plans are prepared by water purveyors to ensure that drinking water sources are protected from contaminants that could impact the safety of drinking water. Water systems are required to develop Watershed Control Programs for surface water sources or Wellhead Protection Programs for ground water sources. Source Water Protection Plans will help achieve drinking water quality objectives in basins identified as

impaired. These Plans are also part of the state's Source Water Assessment Program being developed in accordance with EPA requirements.

Conservation Plans document how purveyors intend to comply with the State's water conservation requirements. Conservation plans are developed to ensure efficient water use and adequate water rights for existing and future needs. They will be important vehicles for achieving water conservation objectives in those basins where ecological impairment criteria, such as declining fish stocks, are linked to insufficient in-stream flows.

Coordinated Water System Plans and Water System Plans are required to contain water demand forecasts and strategies for ensuring adequate water supplies to meet future needs. The strategies, developed to meet future needs of public water supplies, will have a direct impact on the quality of the aquatic resources in a given region.

## **Ground Water Management Plans**

Ground water management plans are developed in areas experiencing water quantity and/or quality problems or where aquifers are determined to be of critical importance to the region (called ground water management areas, or GWMA's). A GWMA can be proposed by any county, city, town, or any other entity having its own incorporated government including public utility districts, health departments or districts, water districts, irrigation districts, sewer districts, conservation districts, or ground water user groups. Ecology is lead agency for the Ground Water Management Program.

After a GWMA is identified, a ground water advisory committee is formed to develop a ground water plan. The plan describes:

- the ground water management area
- the water allocation or water quality problems and objectives in the area
- actions needed to achieve the objectives, and the tasks, duties, roles and responsibilities of all parties responsible for implementing the action plan
- monitoring requirements

## **Interstate Ground Water Issues**

Washington's most critical aquifers in terms of social and economic importance are shared by Oregon and Idaho (Columbia Aquifer System, the Spokane-Rathdrum Prairie Aquifer, and the Portland Basin). In order to protect and manage both the quality and quantity of these aquifers for current and future beneficial uses, a cooperative, comprehensive ground water protection plan should be developed and implemented between State, and tribal governments. Specific areas of the federal Comprehensive State Ground Water Protection Program (CSGWPP) can be expanded to include interstate concerns.

## **Intrastate Ground Water Issues**

Ground water contamination is occurring in many areas of the state and is being addressed by a multitude of state, federal and local agencies. It is generally agreed that the most pressing ground water issue is the lack of a coordinated data collection and storage system. Numerous federal, State, local, and tribal governments collect ground water information on a regular basis, but have no way to share this information. This results in repetition, useless expenditures of limited funds, and decisions based on limited information.

## **Underground Injection Control (UIC)**

Washington State currently classifies all of its ground water as a potential drinking water source, which is the highest beneficial use. Wells can become a path for contamination to enter ground water if they are not carefully sited, dug, maintained, and closed. The most common well is a water well. Another type is an injection well.

Injection wells are human-made or improved holes in the ground, deeper than they are wide. They are used to release or dispose of fluids underground. A fluid is any flowing matter, regardless of whether it is in a semisolid, liquid, sludge, or gaseous state. If an injection well exists present, it must be registered with Ecology whether it is used or not. This is especially important if the well is located in a Wellhead Protection Area, Critical Recharge Area, or other sensitive ground water protection area.

Ecology has regulatory authority over the UIC program for Washington State. Registering an injection well is free, but requires completing a registration form which designates the location and use of the well, among other items. This information is entered into the statewide UIC inventory.

## **Federal Programs:**

### **Public Law 566 - Small Watershed Program**

The Natural Resources Conservation Service has been using this program since 1978 in Washington to address water quality problems on agricultural lands. This program is based on a detailed watershed plan that identifies problems and proposes alternatives. Individual contracts lasting five to ten years are developed and implemented by individual landowners. Cost share or saving is provided to install conservation practices to solve problems identified in the plan. NRCS currently has seven active small watershed projects statewide.

### **Environmental Quality Incentive Program (EQIP)**

This program came from the 1996 Farm Bill and is designed to improve resource conditions on agricultural lands by offering cost share and technical assistance to the landowners. This is a competitive program where 75 percent must be spent on problems

associated with livestock impacts and be based on a locally led process. Water quality problems are a major component of many funded proposals. NRCS typically receives \$2-4 million a year for cost sharing. This is a very popular program. In 1998 there were 674 applications, but fewer than half were funded. Project funding is targeted to geographic priority areas.

## **Conservation Reserve Program (CRP)**

The Conservation Reserve Program reduces soil erosion by encouraging farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, such as tame or native grasses, wildlife plantings, trees, filter strips, or riparian buffers. Farmers receive an annual rental payment for the term of the multi-year contract. Cost sharing is provided to establish the vegetative cover practices.

## **Wetlands Reserve Program**

The Wetlands Reserve Program is a voluntary program to restore wetlands. Participating landowners can establish conservation easements of either permanent or 30-year duration, or can enter into restoration cost-share agreements where no easement is involved. In exchange for establishing a permanent easement, the landowner receives payment up to the agricultural value of the land and 100 percent of the restoration costs for restoring wetlands.

## **Conservation Reserve Enhancement Program (CREP)**

CREP, a new federal-state initiative, is designed to make streamside conservation measures a practical alternative for many farmers. The program improves upon the U.S. Department of Agriculture's longstanding Conservation Reserve Program by offering farmers increased incentives to voluntarily convert environmentally-sensitive cropland into riparian forest or vegetative buffers and wetlands. Areas targeted to receive CREP funding in Washington are generally associated with salmon recovery efforts.

CREP is a revolutionary new program using State and federal resources to help solve environmental problems. It combines an existing federal effort, the Conservation Reserve Program (CRP), with state programs to provide a framework for USDA to work in partnership with states and local interests to meet State-specific environmental objectives. The program provides for voluntary agreements with farmers to convert cropland to native grasses, trees, and other vegetation, in return for rental payments and other incentives.

In Washington, the CREP program hopes to enroll farmers whose land totals 100,000 acres or 3-4,000 miles of riparian habitat on farmland next to salmon spawning streams. At least \$200 million will be available to help Washington farmers restore salmon habitat

and protect water quality over the next 15 years.

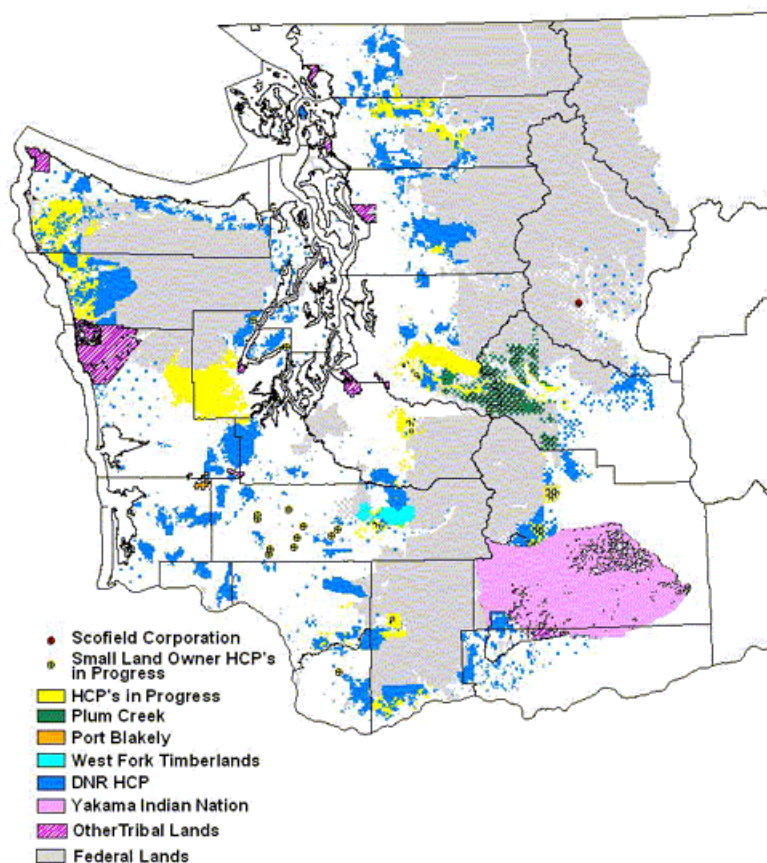
## Habitat Conservation Plans

In Washington, Habitat Conservation Plans (HCPs), are administered primarily by National Marine Fisheries Service. Most of the HCPs are centered around the conservation of salmon and steelhead trout. These include programs administered under the Endangered Species Act, the Federal Power Act, the Clean Water Act, and the Magnuson-Stevens Act, among others.

The HCP program provides policy and technical expertise to non-Federal entities that want to develop HCPs. There are presently four completed HCPs that cover about 2 million acres in Washington State. Another dozen or so HCPs, ranging in size from 100 to 215,000 acres are under development. The size and complexity of HCPs varies and may cover small to large areas and include all private activities (e.g., logging, ranching, residential or commercial development).

The following map shows the extent of HCPs in Washington:

**Figure 4.1 HCPs in Washington State**



Source: National Marine Fisheries Service Web Site

## **US Forest Service**

One of the US Forest Service goals is to ensure sustainable ecosystems. To meet this goal, the USFS has implemented several programs. One is the restoration of watersheds. This program includes decommissioning forest service roads and suspending road construction and reconstruction in many sensitive areas. Another program is land acquisition, through exchange or purchase. This program protects habitat, while allowing for more effective management of watersheds. One example of this program is the incorporation of approximately 200 acres of the Columbia River Gorge into the National Scenic Area.

## **US Geological Survey**

The mission of the US Geological Survey is to provide reliable scientific information to describe and understand the earth, minimize loss of life and property from natural disasters, manage water, biological, energy and mineral resources, and to enhance and protect our quality of life. One program that promotes the USGS's mission in Washington State is the National Water-Quality Assessment (NAWQA) Program. The goals for the NAWQA study are to summarize the status and trends of the surface and ground water quality in the study area, to describe the processes affecting water quality and the aquatic ecology, and to get the results in the hands of managers, policy makers, and the public in the most usable and timely manner possible.

The study area includes 13,100 square miles between the Columbia and Snake Rivers including all of the Crab Creek and Palouse River drainages. Water quality issues include the study of nitrates in ground water; pesticides and other organic contaminants in ground water; erosion and sedimentation, particularly in the Palouse drainage basin; nutrient and pesticide concentrations in streams affecting aquatic biota; and the loss of stream habitat.

## **U. S. Fish & Wildlife Service**

In 1994, the US Fish & Wildlife Service adopted the "Ecosystem Approach to Fish and Wildlife Conservation," recognizing the need to treat the landscape as a community, a whole much greater than the sum of the parts. The ecosystem approach achieves landscape-level conservation of fish, wildlife, plants and their habitats through cross program coordination with the USFS and partnerships with organization and individuals outside the USFS.

## **Other**

There are numerous other programs that we did not mention. This section was meant to highlight a few - not all. We will edit this section in future revisions.